



New Tools for Regulators in Addressing the Impact of Renewable Energy and Energy Efficiency Policy

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Public Utility Research Center

Research

Expanding the body of knowledge in public utility regulation, market reform, and infrastructure operations (e.g. benchmarking studies of Peru, Uganda, Brazil and Central America)

Education

Teaching the principles and practices that support effective utility policy and regulation (e.g. PURC/World Bank International Training Program on Utility Regulation and Strategy offered each January and June)

Service

Engaging in outreach activities that provide ongoing professional development and promote improved regulatory policy and infrastructure management (e.g. in-country training and university collaborations)



The Body of Knowledge on Infrastructure Regulation





The Body of Knowledge on Infrastructure Regulation

www.regulationbodyofknowledge.org

8 New “Regulatory Challenges” on Clean Energy and Energy Efficiency about to be Released!



1. In terms of broad public policy, what is the role of the sector regulator in promoting renewable energy (RE) and energy efficiency (EE)?
2. What are standards that regulators can use to evaluate different approaches toward promoting renewable energy development and energy Efficiency?
3. What are the regulatory issues presented by renewable technologies (solar, wind, biomass, geothermal, and hydropower) and what are the basic characteristics of these options?
4. What are the different approaches for promoting renewable energy development and the role of the regulator under each approach?
5. If a government decides to consider feed-in tariffs (FITs) as a tool to promote distributed generation via renewable energy, what are the regulatory steps that should be taken to these implement rules?
6. If the government decides to use purchase power agreements as a tool to obtain renewable energy, what are the regulatory steps that should be taken to implement rules?
7. What is the role of the regulator in clean energy and energy efficiency?
8. How have countries linked policymaking related to energy efficiency to regulatory functions?



Outline

- Expanded Interest in Renewable Energy and Energy Efficiency
- The Role of the Regulator in Promoting Renewable Energy and Energy Efficiency
- Standards of Evaluation



Status of Global Carbon Policy

- Concern over environmental externalities goes beyond the traditional regulatory goal
- Lack of global consensus on carbon dioxide emissions leads to considerable uncertainty
- Significant long term investments are being made by utilities and customers, making some assumption about carbon prices
- Some investors are going to be wrong, leading to stranded assets



Regulatory Functions Affecting RE/EE

- Issuing licenses related to regulatory functions
- Setting performance standards
- Monitoring the performance of regulated firms
- Establishing the price level and the structure of tariffs
- Establishing a Uniform Accounting System
- Arbitrating disputes among stakeholders
- Performing (usually via independent consultancy) management audits on regulated firms
- Developing human resources for the regulatory commission
- Reporting sector and commission activities to appropriate government authorities



Policy-Making vs. Regulating

- Macro policy, optimally, is set by the Government
- Government policy must be set and altered only on a prospective basis
- Regulators are creatures of the state and not necessarily of the Government
- Policy vacuums are inherent in infrastructure and are to be expected
- Some policy issues require technical expertise to be resolved
- Regulatory decision making, policy or otherwise, must be subject to appellate review
- Sector regulators need to coordinate their decisions with other government agencies



Bringing Transparency to the Process

- From Grace, Donovan, and Melnick, *When Renewable Energy Policy Objectives Conflict: A Guide for Policymakers*
- Defining and prioritizing objectives and constraints
- Establishing jurisdiction and authority
- Defining boundaries for policy evaluation
- Defining decision-making standards
- Specifying decision-making metrics
- Addressing uncertainty and risk



Standards of Evaluation

- Standards from *The Handbook for Evaluating Infrastructure Regulatory Systems*, Brown, Stern and Tenenbaum
- **Credibility**
 - Investors must have confidence that the regulatory system will honor its commitments.
- **Legitimacy**
 - Consumers must be convinced that the regulatory system will protect them from the exercise of monopoly power, whether through high prices or poor service, or both.
- **Transparency**
 - The regulatory system must operate transparently, so that investors and consumers “know the terms of the deal.”
- **Efficiency**
 - Producers must deliver the right levels, mixes and qualities of outputs, given the limited resources available.



Table 2-2. The Five Principal Cost-Effectiveness Tests Used in Energy Efficiency

Test	Acronym	Key Question Answered	Summary Approach
Participant cost test	PCT	Will the participants benefit over the measure life?	Comparison of costs and benefits of the customer installing the measure
Program administrator cost test	PACT	Will utility bills increase?	Comparison of program administrator costs to supply-side resource costs
Ratepayer impact measure	RIM	Will utility rates increase?	Comparison of administrator costs and utility bill reductions to supply-side resource costs
Total resource cost test	TRC	Will the total costs of energy in the utility service territory decrease?	Comparison of program administrator and customer costs to utility resource savings
Societal cost test	SCT	Is the utility, state, or nation better off as a whole?	Comparison of society's costs of energy efficiency to resource savings and non-cash costs and benefits

Source: Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects.



Conclusions

- Uncertainty around the form that global policy will eventually take
- Concern over the cost of the regulation without regard for the fact that delay costs money as well
- Flexibility and communication are essential to addressing the challenges



Thank You

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